

FIGURE 1

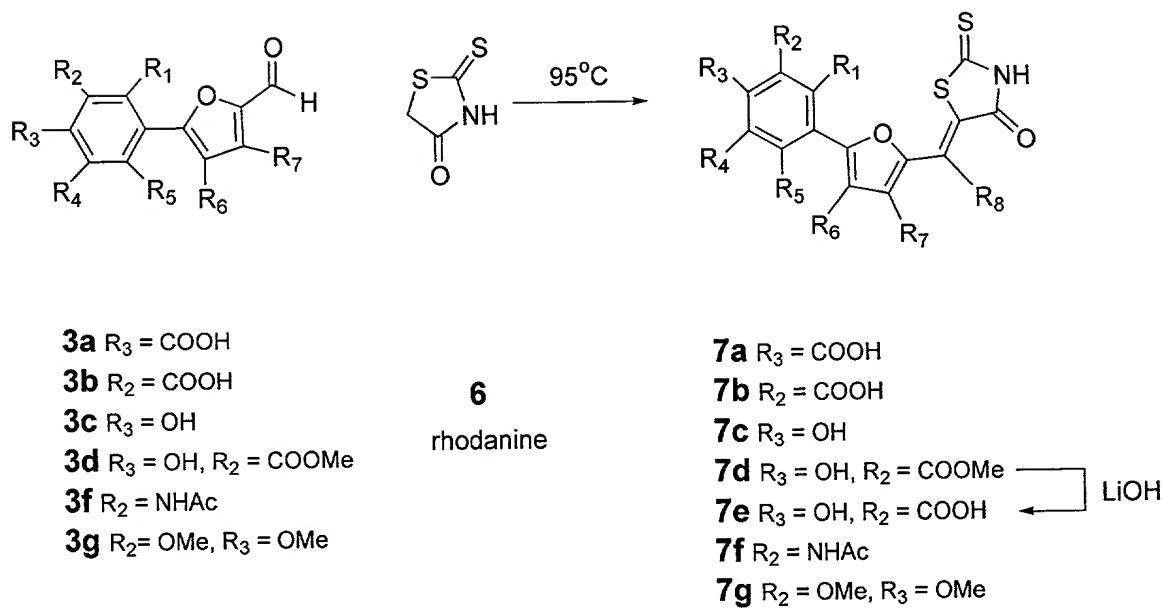
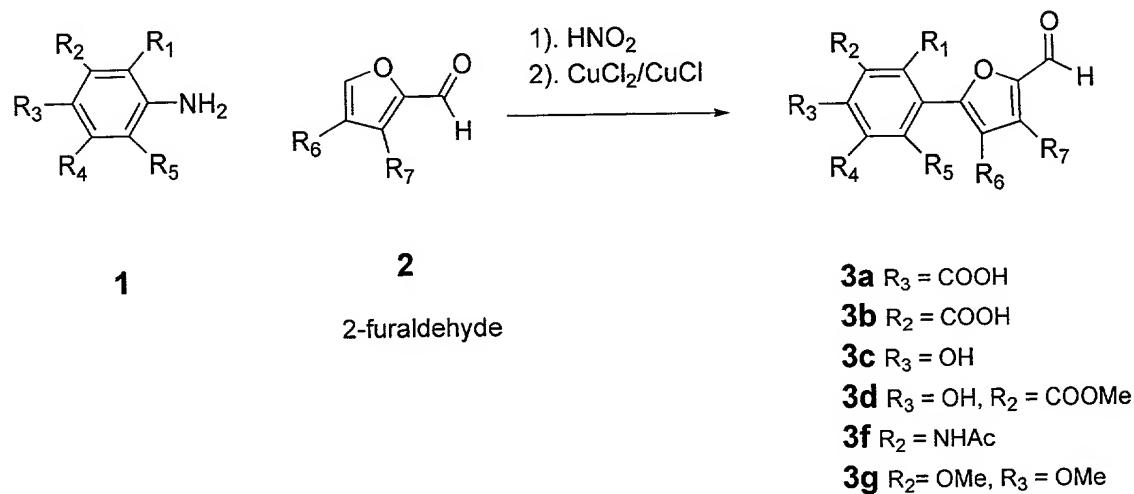


FIGURE 2

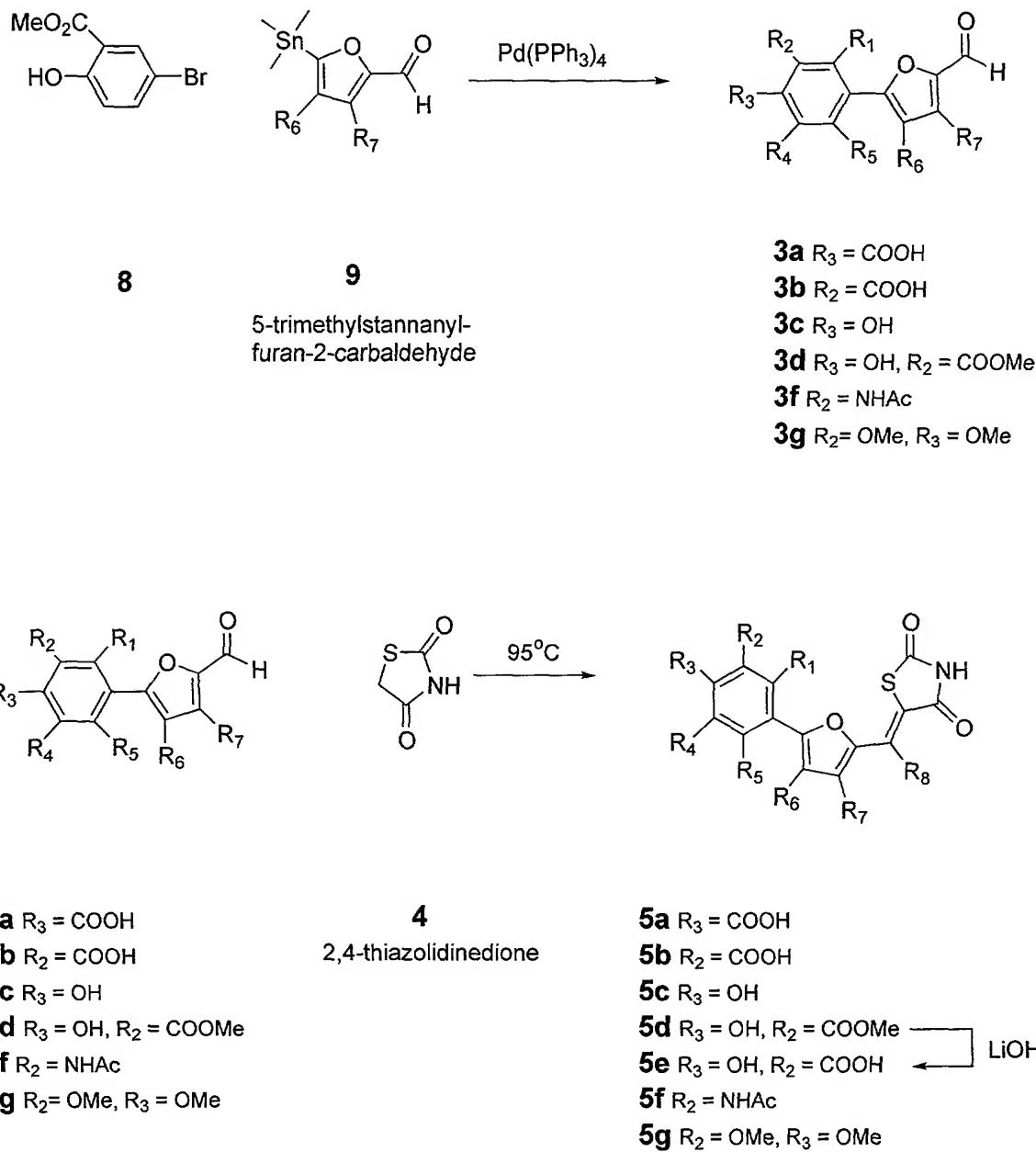


FIGURE 3

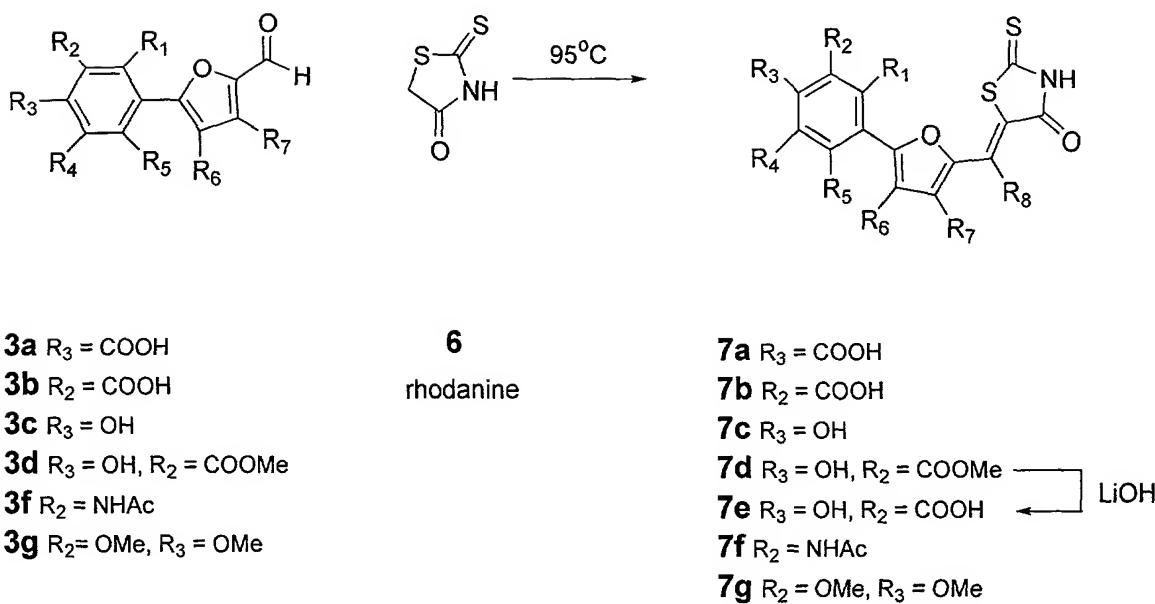
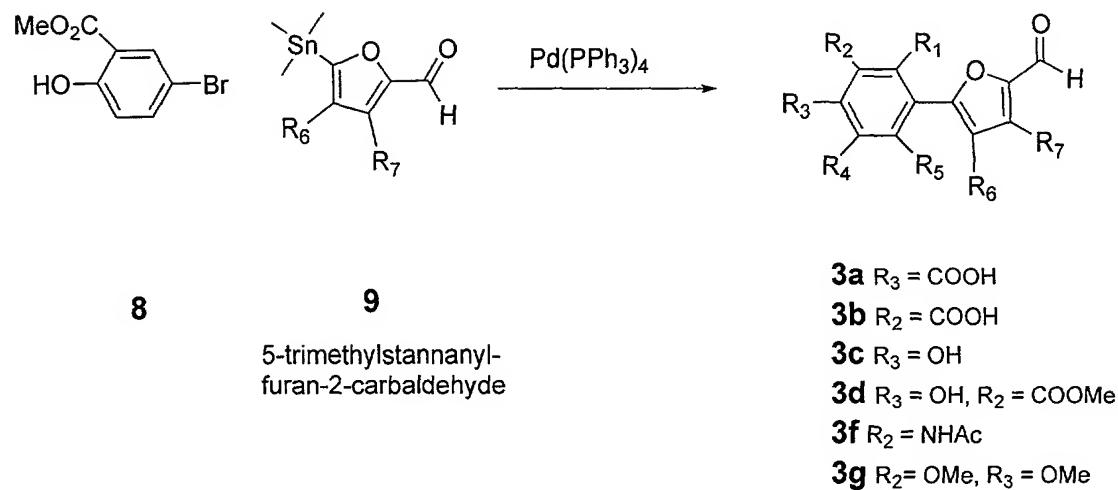
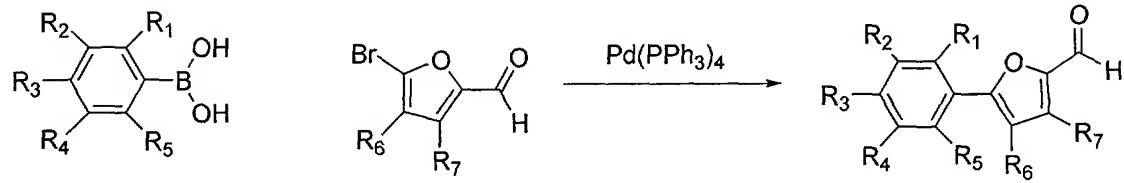
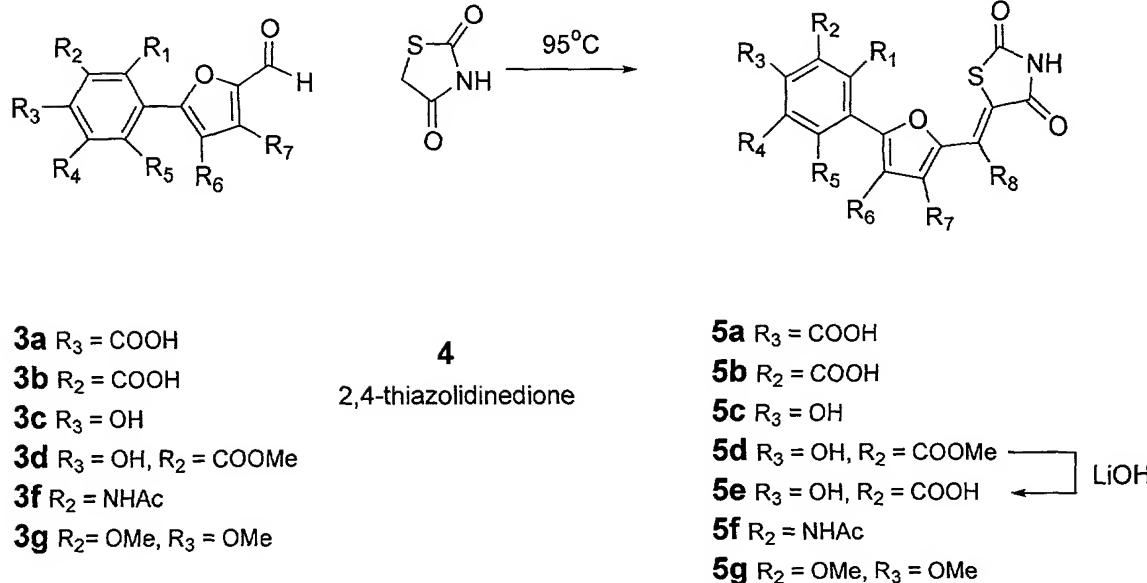


FIGURE 4

**10a** $\text{R}_2 = \text{NHAc}$ **10b** $\text{R}_2 = \text{OMe}$, $\text{R}_3 = \text{OMe}$ **11**

5-bromo-2-furaldehyde

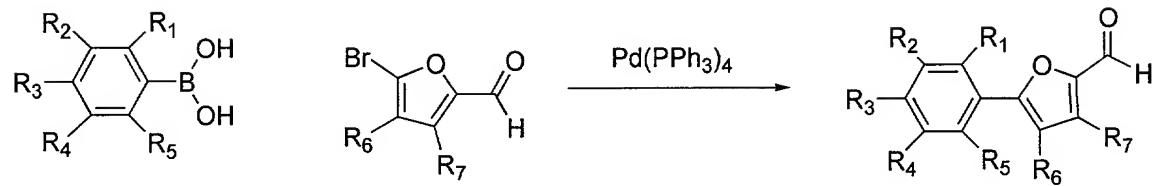
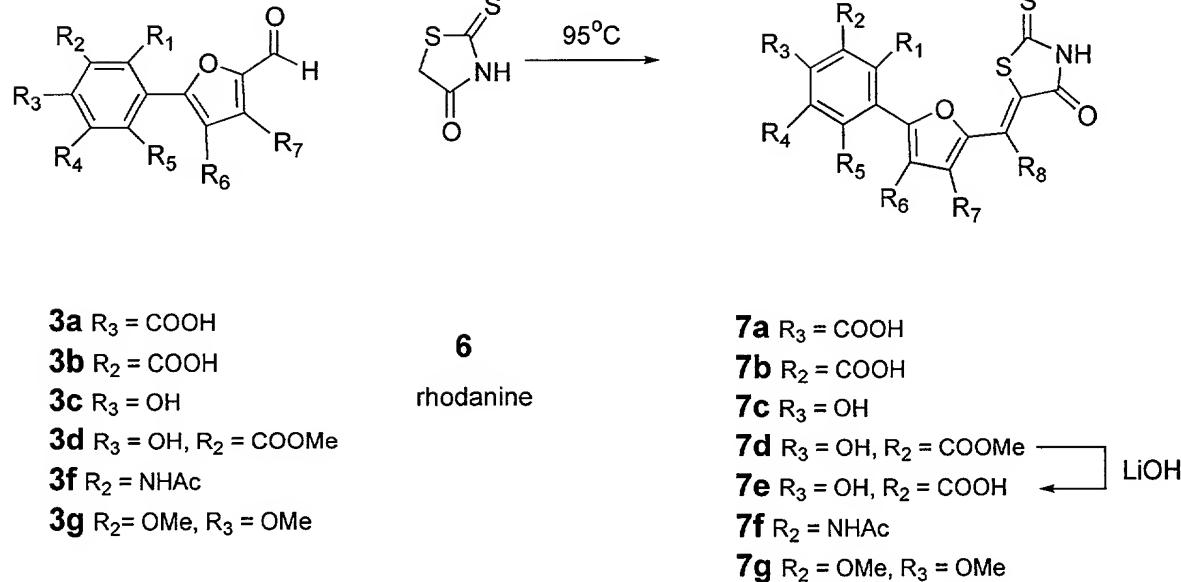
3a $\text{R} = 4\text{-COOH}$ **3b** $\text{R} = 3\text{-COOH}$ **3c** $\text{R} = 4\text{-OH}$ **3d** $\text{R} = 4\text{-OH, 3-COOMe}$ **3f** $\text{R} = 3\text{-NHAc}$ **3g** $\text{R} = 3\text{-OMe, 4-OMe}$ **3a** $\text{R}_3 = \text{COOH}$ **3b** $\text{R}_2 = \text{COOH}$ **3c** $\text{R}_3 = \text{OH}$ **3d** $\text{R}_3 = \text{OH, R}_2 = \text{COOMe}$ **3f** $\text{R}_2 = \text{NHAc}$ **3g** $\text{R}_2 = \text{OMe, R}_3 = \text{OMe}$ **4**

2,4-thiazolidinedione

5a $\text{R}_3 = \text{COOH}$ **5b** $\text{R}_2 = \text{COOH}$ **5c** $\text{R}_3 = \text{OH}$ **5d** $\text{R}_3 = \text{OH, R}_2 = \text{COOMe}$ **5e** $\text{R}_3 = \text{OH, R}_2 = \text{COOH}$ **5f** $\text{R}_2 = \text{NHAc}$ **5g** $\text{R}_2 = \text{OMe, R}_3 = \text{OMe}$

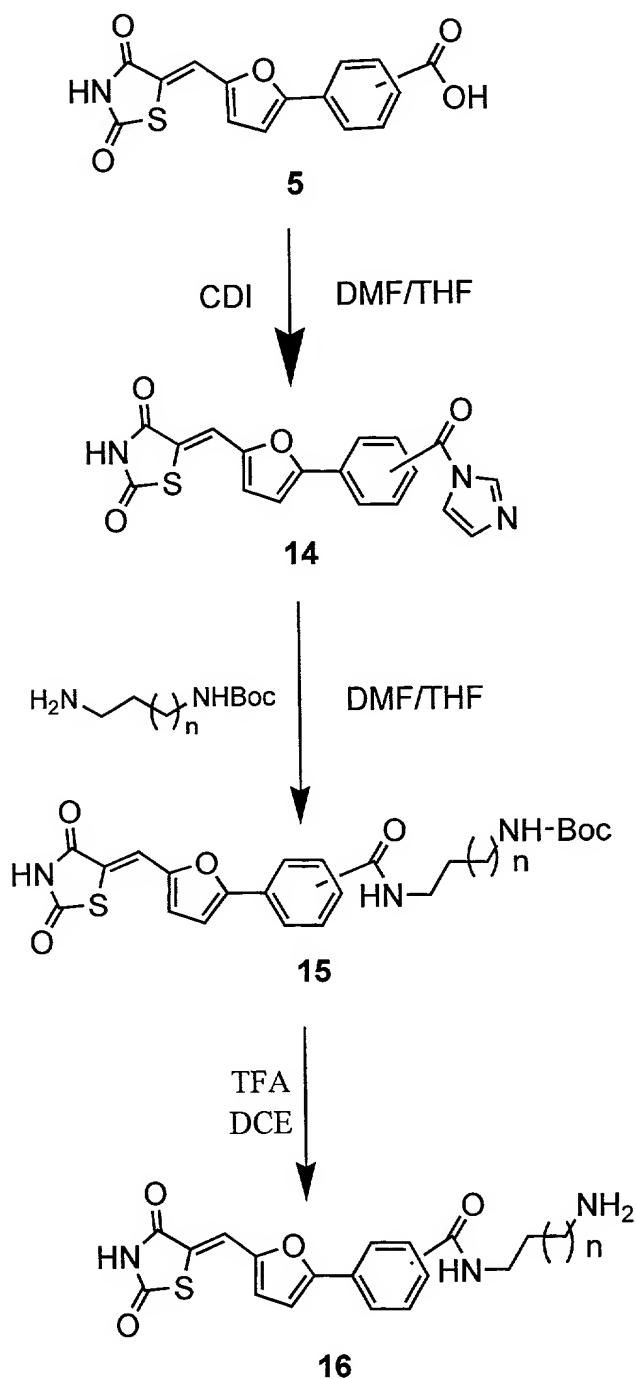
LiOH

FIGURE 5

**10a** $\text{R}_2 = \text{NHAc}$ **10b** $\text{R}_2 = \text{OMe}$, $\text{R}_3 = \text{OMe}$ 5-bromo-2-furaldehyde**11****3a** $\text{R} = 4\text{-COOH}$ **3b** $\text{R} = 3\text{-COOH}$ **3c** $\text{R} = 4\text{-OH}$ **3d** $\text{R} = 4\text{-OH, 3-COOMe}$ **3f** $\text{R} = 3\text{-NHAc}$ **3g** $\text{R} = 3\text{-OMe, 4-OMe}$ **3a** $\text{R}_3 = \text{COOH}$ **3b** $\text{R}_2 = \text{COOH}$ **3c** $\text{R}_3 = \text{OH}$ **3d** $\text{R}_3 = \text{OH, R}_2 = \text{COOMe}$ **3f** $\text{R}_2 = \text{NHAc}$ **3g** $\text{R}_2 = \text{OMe, R}_3 = \text{OMe}$ **6**

rhodanine

7a $\text{R}_3 = \text{COOH}$ **7b** $\text{R}_2 = \text{COOH}$ **7c** $\text{R}_3 = \text{OH}$ **7d** $\text{R}_3 = \text{OH, R}_2 = \text{COOMe}$ **7e** $\text{R}_3 = \text{OH, R}_2 = \text{COOH}$ **7f** $\text{R}_2 = \text{NHAc}$ **7g** $\text{R}_2 = \text{OMe, R}_3 = \text{OMe}$ **FIGURE 6**

**FIGURE 7**

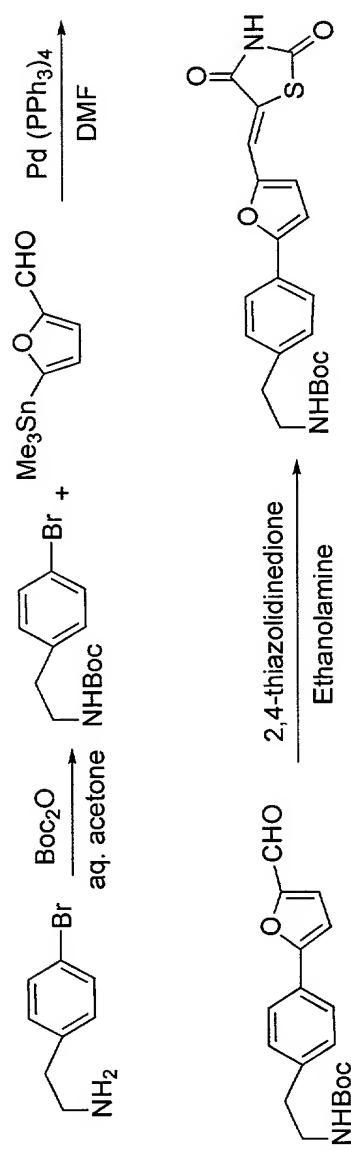


FIGURE 8

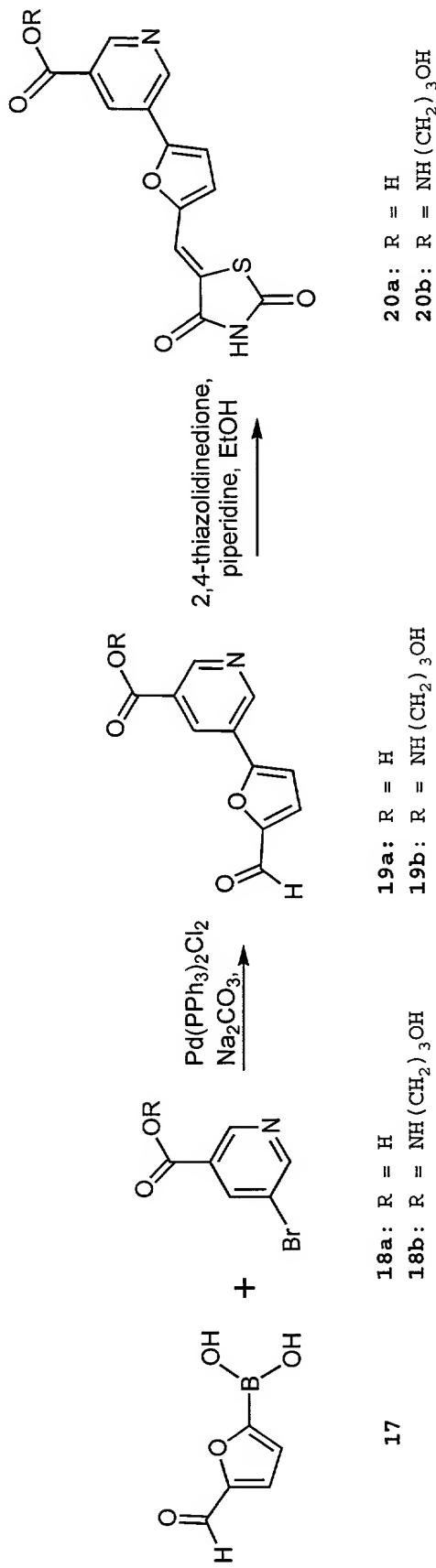


FIGURE 9

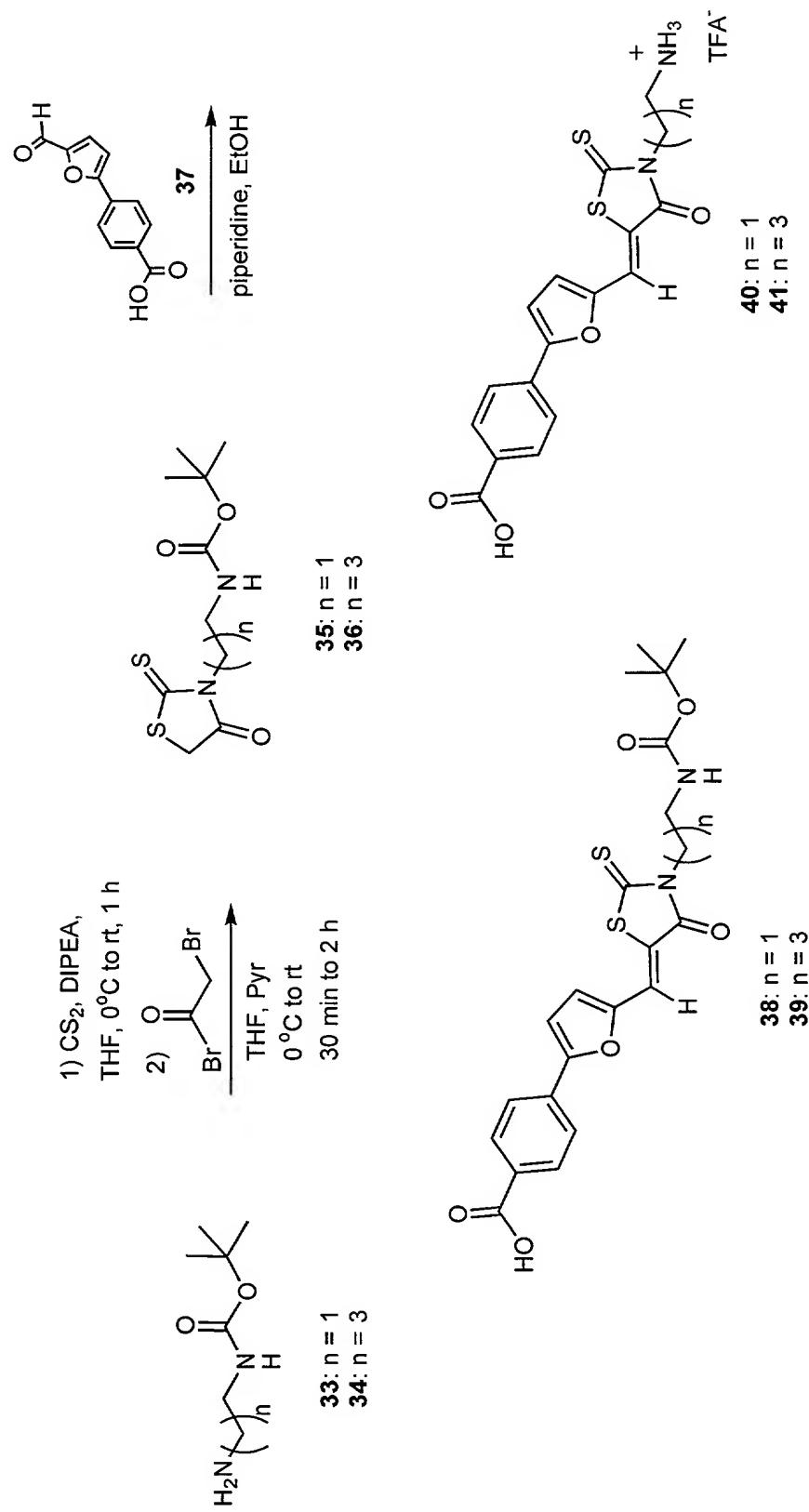


FIGURE 10

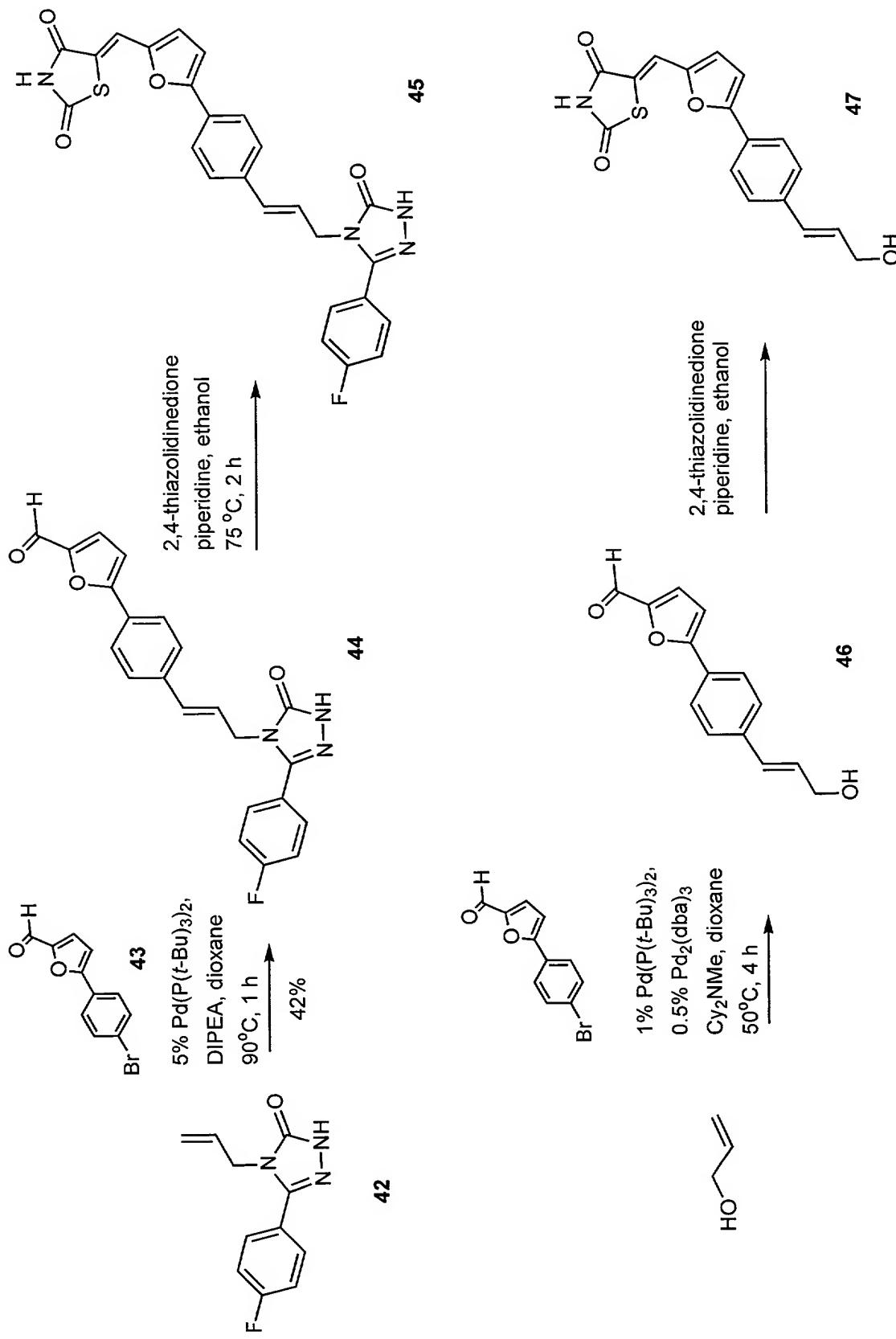


FIGURE 11

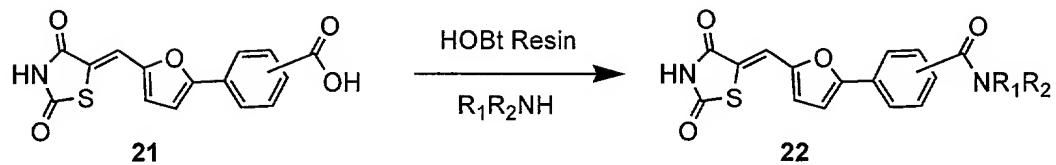


FIGURE 12a

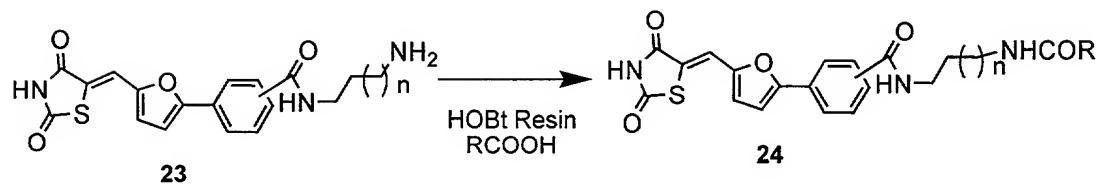


FIGURE 12b

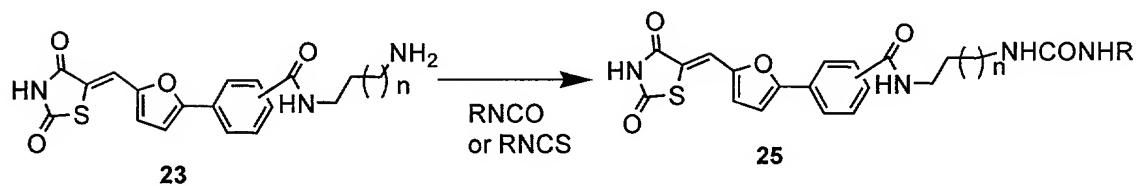


FIGURE 12c

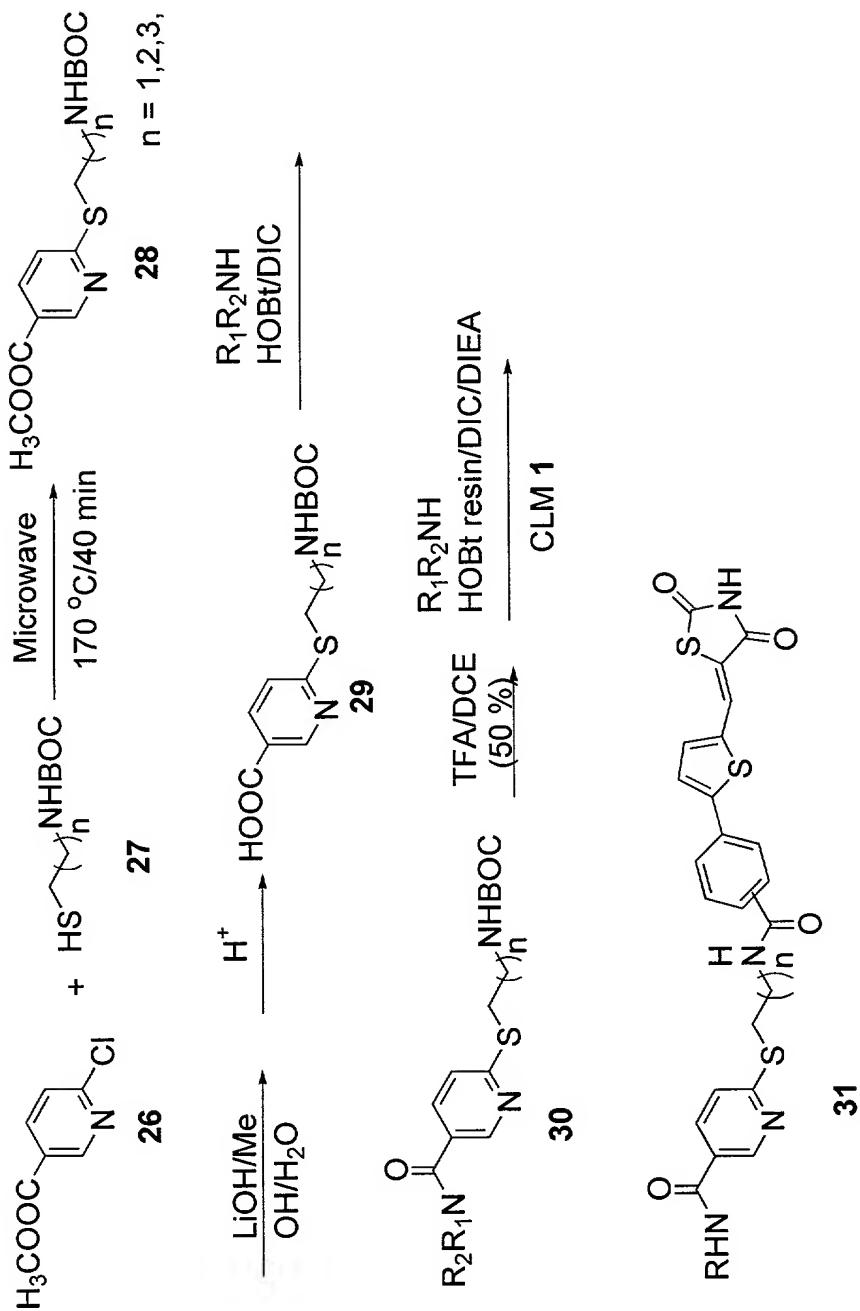


FIGURE 13

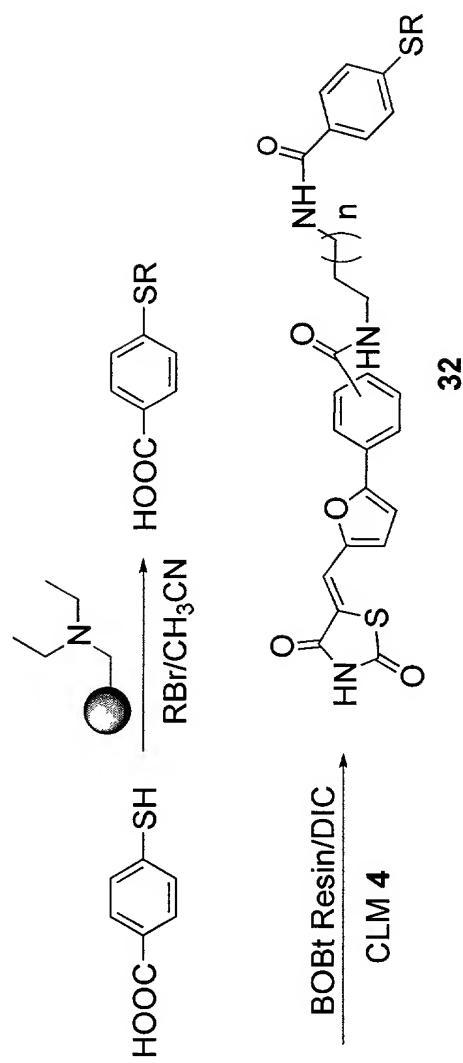


FIGURE 14

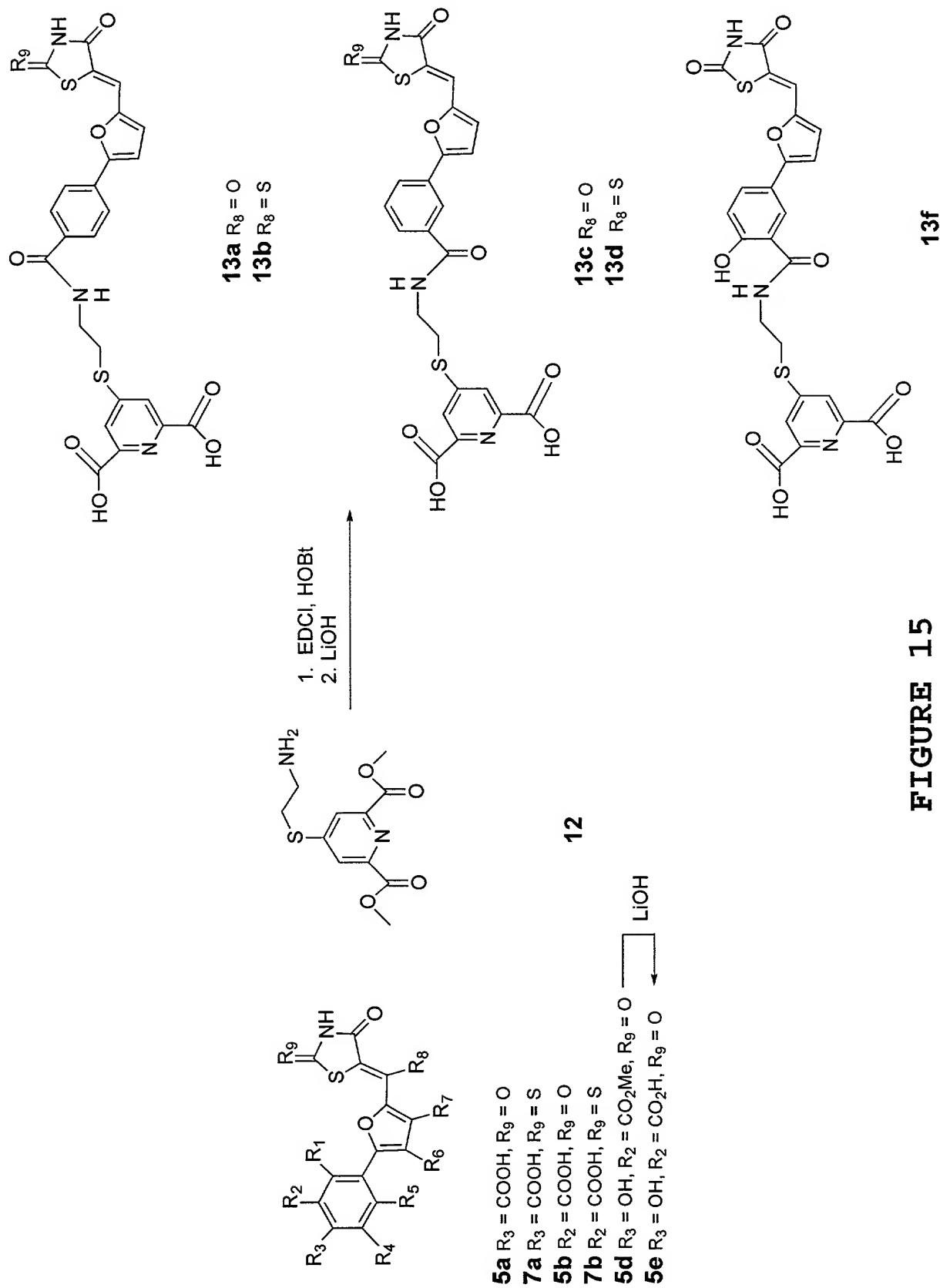


FIGURE 15

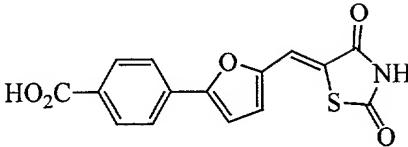
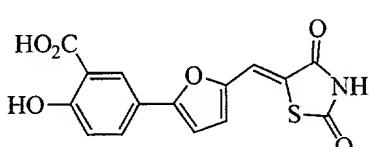
	5a	5e
Structure		
DHPR IC ₅₀	> 200 μM	> 200 μM
LDH IC ₅₀	Not tested	46 μM
ADH IC ₅₀	116 μM	21 μM
DHFR IC ₅₀	> 75 μM	Not tested
DOXPR IC ₅₀	> 200 μM	> 100 μM
GAPDH IC ₅₀	> 200 μM	> 200 μM
IPMDH IC ₅₀	Not tested	> 50 μM
IMPDH IC ₅₀	> 200 μM	2.15 μM
AR IC ₅₀	2.26 μM	No inhibition
HMGCoAR IC ₅₀	49.3 μM	245 nM

FIGURE 16

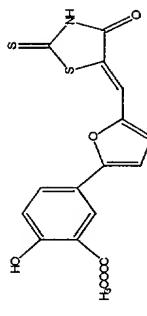
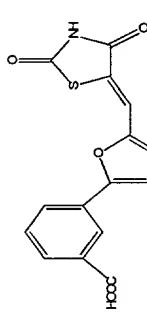
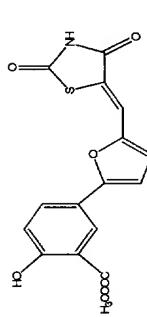
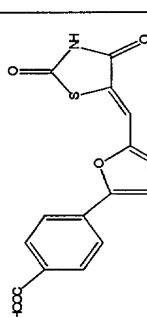
Structure	HMGCoAR	IMPDH	DOXPR	DHPR	DHFR	IPMDH	GAPDH	AR	ADH	LDH
	1.75 μM	245 nM	> 400 μM	> 400 μM	No inhibition	> 400 μM	> 400 μM	Not tested	Not tested	143 nM
	58.8 μM	2.15 μM	> 100 μM	> 200 μM	No inhibition	> 50 μM	> 200 μM	Not tested	Not tested	340 nM
										
										

FIGURE 17

Compound	Chemical structure	IC ₅₀ for DHPR (μM)
13a		0.536
13b		7.1
13c		13.0
13d		0.254
13f		4.91

FIGURE 18

Compound #	Compound Name	Structure
5a	4- [5- (2,4-dioxo-thiazolidin-5-ylidenemethyl)-furan-2-yl]benzoic acid	
5b	3- [5- (2,4-dioxo-thiazolidin-5-ylidenemethyl)-furan-2-yl]benzoic acid	
5c	5- [5- (4-hydroxy-phenyl)-furan-2-ylmethylene]-thiazolidine-2,4-dione	
5d	5- [5- (2,4-dioxo-thiazolidin-5-ylidenemethyl)-furan-2-yl]-2-hydroxy-benzoic acid methyl ester	
5e	5- [5- (2,4-dioxo-thiazolidin-5-ylidenemethyl)-furan-2-yl]-2-hydroxy-benzoic acid	

FIGURE 19a

5f	N-{3-[5-(2,4-dioxo-thiazolidin-5-ylidenemethyl)-furan-2-yl]phenyl}acetamide	
5g	5-[5-(3,4-dimethoxyphenyl)-furan-2-ylmethylene]-thiazolidine-2,4-dione	
7a	4-[5-(4-oxo-2-thioxo-thiazolidin-5-ylidenemethyl)-furan-2-yl]benzoic acid	
7b	3-[5-(4-oxo-2-thioxo-thiazolidin-5-ylidenemethyl)-furan-2-yl]benzoic acid	
7c	5-[5-(4-hydroxyphenyl)-furan-2-ylmethylene]-2-thioxo-thiazolidine-4-one	
7d	2-hydroxy-5-[5-(4-oxo-2-thioxo-thiazolidine-5-ylidenemethyl)-furan-2-yl]-2-benzoic acid methyl ester	

FIGURE 19b

7e	2-hydroxy-5- [5- (4-oxo-2-thioxo-thiazolidine-5-ylidenemethyl)-furan-2-yl]-2-benzoic acid	
7f	N- {3- [5- (4-oxo-2-thioxo)-thiazolidin-5-ylidenemethyl)-furan-2-yl]phenyl}acetamide	
7g	5- [5- (3,4-dimethoxy-phenyl)-furan-2-ylmethylene]-2-thioxo-thiazolidin-4-one	

FIGURE 19c

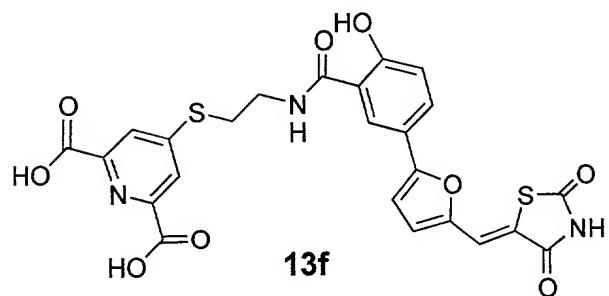
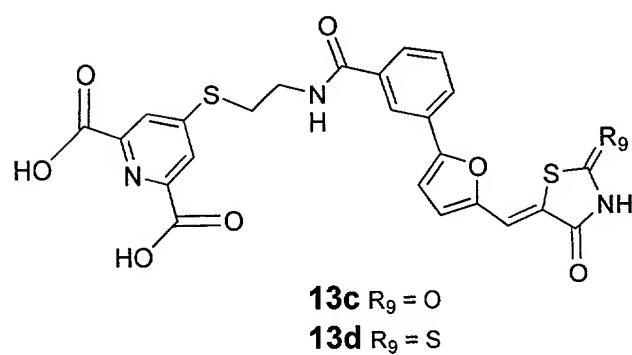
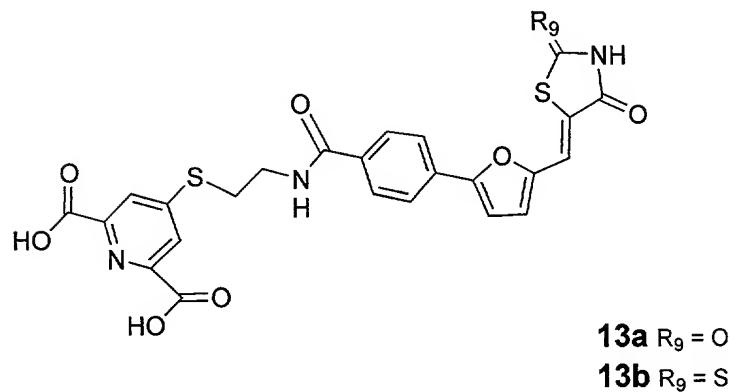


FIGURE 20